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-- File: StringDefs.Mesa
-- Edited by Sandman on July 13, 1977 7:35 AM

DIRECTORY AltoDefs: FROM "altodefs";

DEFINITIONS FROM AltoDefs;

StringDefs: DEFINITIONS =
BEGIN

  StringHeaderSize: PRIVATE INTEGER = 2;

  CharsPerWord: INTEGER = AltoDefs.CharsPerWord;
  charlength: INTEGER = AltoDefs.charlength;
  CharsPerPage: INTEGER = AltoDefs.CharsPerPage;
  LogCharsPerPage: INTEGER = AltoDefs.LogCharsPerPage;

  SubStringDescriptor: TYPE = RECORD [
    base: STRING,
    offset, length: CARDINAL];

  SubString: TYPE = POINTER TO SubStringDescriptor;

  Overflow: SIGNAL;
  InvalidNumber: SIGNAL;
  StringBoundsFault: SIGNAL [s:STRING] RETURNS [ns:STRING];

  WordsForString: PROCEDURE [nchars:INTEGER] RETURNS [INTEGER];

  AppendChar: PROCEDURE [s:STRING, c:CHARACTER];
  AppendString: PROCEDURE [to,from:STRING];
  EqualString, EquivalentString: PROCEDURE [s1,s2:STRING] RETURNS [BOOLEAN];

  AppendSubString: PROCEDURE[to:STRING, from:SubString];
  EqualSubStrings, EquivalentSubStrings: PROCEDURE [s1,s2:SubString] RETURNS [BOOLEAN];
  DeleteSubString: PROCEDURE [s:SubString];
  StringToDecimal: PROCEDURE [STRING] RETURNS [INTEGER];
  StringToOctal: PROCEDURE [STRING] RETURNS [UNSPECIFIED];
  StringToNumber: PROCEDURE [STRING,CARDINAL] RETURNS [UNSPECIFIED];

-- routines for bcpl strings

  bcplStringHeaderSize: PRIVATE INTEGER = 1;

  bytelpair: PRIVATE TYPE = MACHINE DEPENDENT RECORD [left,right:CHARACTER];

  bcplSTRING: TYPE = PRIVATE MACHINE DEPENDENT RECORD[
    length: BYTE, body: CHARACTER,
    rest: ARRAY [1..127] OF bytelpair];

  bcplStringOverflow, mesaStringOverflow: SIGNAL;
  WordsForBcplString: PROCEDURE [n:INTEGER] RETURNS [INTEGER];
  MesaToBcplString: PROCEDURE [s:STRING, t:POINTER TO bcplSTRING];
  BcplToMesaString: PROCEDURE [t:POINTER TO bcplSTRING, s:STRING];

END.
```